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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,957	06/12/2006	Noriyuki Yamazaki	284220US3PCT	5385
22850	7590	12/18/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LAUX, DAVID J	
			ART UNIT	PAPER NUMBER
			4193	
			NOTIFICATION DATE	DELIVERY MODE
			12/18/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/564,957	Applicant(s) YAMAZAKI, NORIYUKI	
	Examiner David Laux	Art Unit 4193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/18/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/27/2006, 04/12/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. The language in this case is not clear and concise and contains numerous grammatical mistakes. Appropriate action is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the gas feed pipe and exhaust pipe must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 15-18 are objected to because of the following informalities: The preamble of the claims start with "The". It is suggested that applicant amend the preambles to start with --A--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 2 & 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With respect to Claim 2 & Claim 7, the examiner does not understand, based on the claims and specification, what a scratch-up means is or how it would be used for rotating the rotary furnace body. For example, Claim 2 recites a limitation for "a scratch-up means for rotating the rotary furnace body" in lines 4-7. For purposes of examination, the examiner will assume applicant is referring to some type of ridge placed on the inner surface of the rotary furnace body to stir up the waste as the rotary furnace body is being rotated.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2 & 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See above for explanation as to why "scratch-up means" is indefinite.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 1-2, 5-6, 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,860,735 to Shimono in view of US 4,597,772 to Coffman. '735 discloses a carbonization plant comprising a heating furnace (10), a rotary furnace body (20) supported in the heating furnace to be freely rotatable, a rotary drive means (30) for rotating the rotary furnace body (20), and a scratch-up means (15) provided at an inner face side of said rotary furnace body (20) for scratching up a charged material in the rotary furnace body (20) by rotation of said rotary furnace body (20) (Col. 2, lines 42-48), wherein said rotary furnace body (20) is formed into a round cylinder (10) (Col. 4, lines Col. 4, line 11), and wherein one end of an exhaust pipe (42) elongating along the shaft center of the rotary furnace body (20) is connected to an end of said rotary furnace body (Col. 5, lines 31-34).

9. '735 fails to disclose a vibration means for vibrating said rotary furnace body, wherein said vibration means comprises one or a plurality of chain-like members, at least one end thereof being fixed on the inner face side of said rotary furnace body, wherein said chain-like members is disposed with a given interval in a direction of rotation of said rotary furnace body, the one chain-like member of said chain-like members disposed in adjoining relation to one another being supported at one end thereof, and the other chain-like member of the chain-like members disposed in adjoining relation to one another being supported at both ends thereof, wherein a gas feed pipe elongating along the shaft center of the rotary furnace body is connected at one end of said rotary furnace body.

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10. '772 teaches a carbonization plant with a vibration means (51) for vibrating a rotary furnace body (11), wherein said vibration means comprises one or a plurality of chain-like members (51), at least one end thereof being fixed on the inner face side of said rotary furnace body (Col. 7, lines 64-65), wherein said chain-like members is disposed with a given interval in a direction of rotation of said rotary furnace body (Col. 7, lines 65-67), the one chain-like member of said chain-like members disposed in adjoining relation to one another being supported at one end thereof, and the other chain-like member of the chain-like members disposed in adjoining relation to one another being supported at both ends thereof (Col. 7, lines 55-60; Fig. 2, 10 and 12), wherein a gas feed pipe (62) elongating along the shaft center of the rotary furnace body is connected at one end of said rotary furnace body (11). It would have been obvious to one skilled in the art at the time of invention to combine the carbonization plant of '735 with the vibration means of '772 because such a combination would have produced the added benefit of a rotary furnace with a means for removing built-up char from the inside of the burn chamber.

11. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over '735 in view of '772 as applied to claims 1-2, 5-6, and 8-9 above, and further in view of JP 08-278082A to Haruyoshi et al. '735 fails to disclose a carbonization furnace wherein said heating furnace is supported to be freely tiltable and further comprising a tilt drive means for tilting the heating furnace and said rotary furnace body together, wherein said tilt drive means is constructed so that the rotary furnace body is inclinable together with said heating furnace depending on the charged amount of said charged material. '082

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teaches a carbonization furnace wherein a heating furnace (1) is supported to be freely tiltable (Par. 0016) and further comprising a tilt drive means (31-33) for tilting the heating furnace, wherein said tilt drive means is constructed so that the rotary furnace body is inclinable together (Par. 0016) with said heating furnace depending on the charged amount of said charged material (Par. 0005). It would have been obvious to one skilled in the art at the time of invention to combine the carbonization furnace of '735 with the tilting furnace of '082 because such a modification would have produced the added benefit of allowing the waste material to evacuate the inner chamber of the furnace by gravity and eliminating the need for a mechanical removal device.

12. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over '735 in view of '772 as applied to claims 1-2, 5-6, and 8-9 above, and further in view of US 6,875,317 to Toyoda. '735 fails to disclose a carbonization plant further comprising a deodorizing device connected at the other end of said exhaust pipe for deodorizing said exhaust gas, wherein said deodorizing device is connected at the other end of said exhaust pipe through a refrigerator for cooling said exhaust gas. '317 teaches a carbonization plant (10) with a deodorizing device (16) connected at the end of said exhaust pipe for deodorizing said exhaust gas (represented by arrow from 11 to 14 in Fig. 1), wherein said deodorizing device (16) is connected at the other end of said exhaust pipe through a refrigerator (14) for cooling said exhaust gas. It would have been obvious to one skilled in the art at the time of invention to combine the carbonization plant of '735 with the deodorization device taught by '317 because such a

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combination would have produced the added benefit of an exhaust gas with fewer odors.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over '735 in view of '772 and '317 as applied to claims 10-11 above, and further in view of JP 2002-284923 to Miyata et al. '735 fails to disclose a carbonization plant with a deodorizing device comprising a heating means, a washing mechanism with water for washing said exhaust gas heated with the heating means, and drainage retrieval means for retrieving the drainage issued by washing with water. '923 teaches a deodorizing device (26) comprising a heating means (28, 29), a washing mechanism with water (30) for washing said exhaust gas heated with the heating means (28, 29), and drainage retrieval means (23) for retrieving the drainage issued by washing with water. It would have been obvious to one skilled in the art at the time of invention to combine the carbonization plant of '735 with the deodorizing device of '923 because such a combination would have produced the added benefit of an exhaust gas with fewer odors.

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over '735 in view of '772 as applied to claims 1-2, 5-6, and 8-9 above, and further in view of US 5,851,246 to Bishop et al. '735 discloses a carbonization plant that is used to carbonize garbage and industrial waste, but does not specifically disclose that tire chips can be used. '246 teaches that tire chips are among the types of garbage and industrial waste that can be used to fuel a carbonization plant. It would have been obvious at the time of invention to combine the carbonization plant of '735 with the tire chip fuel source

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disclosed in '246 because such a combination would have produced the added benefit of an additional type of waste that could be used to fuel the carbonization plant.

15. Claims 14, 15 and 18 are rejected under 35 U.S.C. 103(a) because the above described apparatus would be capable of performing the claimed processes.

16. Claim 16-17 are rejected under U.S.C. 103(a) as being unpatentable over the above described apparatus, and further in view of JP 2003-34518. The above described apparatus does not disclose a carbonization process comprising a step for immersing said charging material in an alkali metal carbonate solution before being charged in said rotary furnace body, said charged material immersed in said alkali metal carbonate solution being heated by mixing with an alkali metal hydroxide in said rotary furnace body in said heating step, and said alkali metal carbonate solution being a drainage retrieved after washing an exhaust gas generated in said heating step with water, wherein a carbonized product is formed by heating said charged material in said rotary furnace body in said heating step, and the carbonized product is converted into activated carbon by mixing with the alkali metal hydroxide with heating.

'518 teaches a process including the steps: immersing said charging material in an alkali metal carbonate solution before being charged in said rotary furnace body (Par. 0007), said charged material immersed in said alkali metal carbonate solution being heated by mixing with an alkali metal hydroxide in said rotary furnace body in said heating step (Par. 0007), and said alkali metal carbonate solution being a drainage retrieved after washing an exhaust gas generated in said heating step with water (Par. 0020), wherein a carbonized product is formed by heating said charged material in said

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rotary furnace body in said heating step, and the carbonized product is converted into activated carbon by mixing with the alkali metal hydroxide with heating (Par. 0011). It would have been obvious to one skilled in the art at the time of invention to combine the carbonization process disclosed in the above described apparatus with the teaching of '518 because such a combination would have produced the added benefit of a charged material to be carbonized.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Laux whose telephone number is (571) 270-7619. The examiner can normally be reached on M-R 7:30-5, F 7:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/D. L./
Examiner, Art Unit 4193

/Derris H Banks/
Supervisory Patent Examiner, Art
Unit 3725
